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AUTHOR Greenberg, Gregory S.; And Others
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ABSTRACT

When in childhood concepts about alcohol and drinking begin to develop has just begun to be investigated. A study was conducted to examine cognitive, maturational, and differential exposure influences on the acquisition of concepts about alcoholic beverages in preschool children. Knowledge about alcoholic beverages and drinking was assessed in 65 female and 66 male children between the ages of 2.5 and 6 years. The children were shown 10 drawings of adults and children in various activities and were asked what the characters would like to drink from five alcoholic and five non-alcoholic beverages. The children also identified the beverages and took the Peabody Picture Vocabulary Test-Revised, and parents completed a questionnaire. The results revealed developmental differences with older children being more aware of the sociocultural drinking norms that adults drink and children do not and that men drink more than women, and exhibiting greater knowledge of alcoholic beverage names. Cognitive capacity of the preschoolers was found to have some influence on their awareness of drinking norms, but no relationship to their ability to identify alcoholic beverage names. Parents' drinking patterns and habits showed a low order but significant connection to children's perceptions of and knowledge about alcohol. Finally, parental race was related to the preschoolers' perceptions of normative drinking patterns and their knowledge of alcoholic beverage norms. (Eight data tables are included.) (NB)

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The Development of Cognitive Structures About Alcoholic Beverages Among Preschoolers

Gregory S. Greenberg, Robert A. Zucker,

and Robert B. Noll

Michigan State University

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THE DEVELOPMENT OF COGNITIVE STRUCTURES ABOUT ALCOHOLIC BEVERAGES AMONG PRESCHOOLERS

ABSTRACT

This study investigated cognitive, maturational, and differential exposure influences on the acquisition of concepts about alcoholic beverages. It is the earliest look at this phenomenon yet reported. Results show a developmental trend in awareness of cultural drinking norms as well as of ability to identify alcoholic beverages. Six-year-olds know better than three-year-olds that adults drink alcoholic beverages and children don't. Older children also were better at identifying alcoholic beverages. These results were only weakly related to cognitive capability, but were more strongly related to individual differences in parent consumption patterns. Results are discussed in terms of early learning within the family and culture of origin.

INTRODUCTION

Alcohol problems are a significant personal, social, and public health problem of adolescence and adulthood. At the same time moderate alcohol consumption is an age-graded behavior that becomes very much a normative part of the conduct of adult life. On both counts the acquisition of cognitive structures about these behaviors is an interesting process.

It has been customary in the older developmental and alcohol literature to take the position that learning about drinking occurs largely in middle childhood and adolescence. Nonetheless, concepts about alcohol and drinking may well develop in earlier years. How early these concepts begin to develop is a question that has begun to be investigated. Some investigators have studied this question with children in middle childhood (Penrose, 1978; Jahoda, Davies, & Tagg, 1980). Some evidence with a clinical sample suggests that alcohol and usage concepts develop even earlier than that (Noll & Zucker, 1983).

The present project is concerned with early influences on the acquisition of alcohol concepts from the perspective of a developmental frame of reference. The current study extends the search for influences to a preschool population. Although earlier studies find that children begin to learn about alcohol and its uses during the school years, with the exception of the Noll-Zucker work (1983) no research has been conducted on perceptions of preschool children concerning alcohol and drinking. In addition, since family variables (e.g., parent use patterns) may influence children's attitudes and cognitions, parental drinking and demographic information were also collected. Therefore, the present study examines the availability of concepts relating to the recognition and use of alcoholic beverages as related to age, exposure (as related to parent consumption patterns) and possible cognitive capacity differences between children.

HYPOTHESES

Hypothesis 1

Due to their greater exposure to and experience within their own environments, older preschool children

are expected to possess greater knowledge than younger children concerning which beverages are appropriate for consumption by adults or children on various types of occasions; in addition, older children are expected to have greater knowledge of alcoholic beverage names. Thus, the older preschool children should have a more developed cognitive structure concerning alcoholic beverage names and usage patterns. They should be more aware of appropriate uses of alcohol (i.e., drinking by children vs. adults) and be better able to correctly name or identify photographs of alcoholic beverages.

Hypothesis 2

Significant cognitive capacity differences (as measured by the Peabody Picture Vocabulary Test-Revised) are expected as related to these children's knowledge of normative drinking patterns and alcoholic beverage names. That is, it is anticipated that children's knowledge of alcohol is explained by cognitive capacity differences as well as by exposure and learning.

Hypothesis 3

Children from heavier drinking families as compared to lighter drinking families should have a better developed cognitive structure concerning alcohol. Because of their greater exposure to drinking they should be more aware of the cultural norms of appropriate usage of alcohol and be better able to correctly name or identify photographs of alcoholic beverages.

Hypothesis 4

Ethnic and cultural differences are known to play a significant role in differentiating among types of drinkers in adulthood. In addition, family environmental variables are likely to play a large role in children's attitudes, values, beliefs and knowledge development. On both these grounds, it is expected that differences in cultural background should be differentially related to preschool children's knowledge of normative drinking patterns and alcoholic beverage names.

METHOD

Sixty-five female and 66 male children, ages 2 1/2 - 6 years were recruited from preschools within the Lansing metropolitan area (see Table 1). In addition, both parents were asked to complete questionnaires. The sample is preponderantly white, and representative of the population (see Table 2). Children's knowledge about alcoholic beverages and drinking were assessed using a Piagetian-like task. This task is an appropriate beverage game where children are shown ten drawings of adults and children in numerous activities and asked what the characters in the drawings would like to drink from an array of ten beverage photographs (5 alcoholic and 5 non-alcoholic) (see Table 3). As a measure of ability to identify alcoholic beverages, the children are also asked to identify the beverages in the photos. Children were also assessed on their receptive vocabulary ability with the Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981).

RESULTS AND DISCUSSION

(1) There are developmental differences with respect to preschoolers' awareness of traditional sociocultural drinking norms ($p<.01$) (see Figures 1 & 2) and knowledge of alcoholic beverage names ($p<.001$) (see Tables 4 & 5). Older children are more aware of these drinking norms (that adults drink and children don't; that men drink more than women) and exhibit greater knowledge of alcoholic beverage names. Their greater knowledge is possibly explained by their advanced exposure to and experience within their own environments. On this basis it is reasonable to expect that these children have more developed cognitive structures concerning alcoholic beverage names and usage patterns.

(2) Cognitive capacity of preschoolers (as measured by the Peabody Picture Vocabulary Test-Revised) had some influence on the awareness of drinking norms ($r=.19$, $p<.05$), but no relationship to their ability to identify alcoholic beverage names ($r=.08$, n.s.) (see Table 4). It was anticipated that children's knowledge of alcohol would be related to cognitive capacity differences as well as to exposure variables. The most plausible explanation for these

weak effects is that cognitive capacity plays a role in younger children, and that there is a ceiling effect on this relationship.

(3) Fathers' and mothers' drinking patterns and habits show a low order but significant connection to children's perceptions of and knowledge about alcohol. Preschoolers whose fathers report drinking alcohol as a means to "escape" perceived that adults drink more alcohol than children whose fathers do not report "escape" drinking habits (r=.24, p<.05) (see Table 6). Preschoolers whose fathers drink more heavily also have greater knowledge of alcoholic beverage names (r=.23, p<.05) (see Table 7). With the Adult minus Child discrimination variable, the most sensitive measure (because it is not confounded by the essentially zero variance choice of alcohol for children) of age graded differences in awareness of cultural norms, again father differences in escape drinking are related to child's ability to discriminate (r = .25). Mother differences in drinking status also are significantly related to child's ability to discriminate (r = .17), with mother's heavier drinking related to greater discriminability by her child. Thus, the children from heavier drinking families as compared to lighter drinking families have a better developed concept or cognitive structure concerning alcohol. These results can be explained by these children's greater exposure to drinking.

(4) Parental race is related to preschool children's perceptions of normative drinking patterns and their knowledge of alcoholic beverage names. Black and Caucasian children chose fewer alcoholic beverages as drinking choices than children of other races, t = 2.64 and 2.81, p<.01, respectively (see Table 8). Also, Caucasian children chose fewer alcoholic beverages as drinking choices for adults than children of other races, t = -3.24, p<.01 (see Table 8). These results were expected (e.g., Haglund & Schuckit, 1982) since ethnic and cultural differences are known to play a significant role in differentiating among types of drinkers in adulthood. In addition, family environmental variables related to ethnicity are likely to play a large role in children's attitudes, values, beliefs and knowledge development.

A theoretical framework necessary to explain these results must include the specification of influencing factors from early childhood. Specifically, sociocultural and community influences including ethnicity, media influences portraying these concepts, and exposure to alcohol use and values about drinking, all help explain why children of different ages and races have different perceptions of normative drinking patterns and knowledge of alcoholic beverage names, even though of very young age. In addition, family influences such as parent drinking patterns and attitudes were found to be salient in shaping the early development and emergence of these alcohol related cognitions.

References

Dunn, L.M., & Dunn, L.M. (1981). Peabody Picture Vocabulary Test-Revised. Circle Pines, Minnesota: American Guidance Service.

Haglund, R., & Schuckit, M. (1982). Epidemiology of alcoholism. In N. Estes & M. Heinemann (Eds.), Alcoholism: Development, consequences, and interventions (pp. 32-48). St. Louis: C.V. Mosby.

Jahoda, G., Davies, J.B., & Tagg, S. (1980). Parents' alcohol consumption and children's knowledge of drinks and usage patterns. British Journal of Addiction, 75, 297-303.

Noll, R.B., & Zucker, R.A. (1983, August). Developmental findings from an alcoholic vulnerability study: The preschool years. Paper presented at the Annual Meeting of the American Psychological Association, Anaheim, California.

Penrose, G. (1978). Perceptions of five and six-year-old children concerning cultural drinking norms. Unpublished doctoral dissertation, University of California, Berkeley.

TABLE 1

CHILD CHARACTERISTICS OF THE STUDY SAMPLE (N = 131)

AGE OF CHILD PARTICIPANTS	SEX OF CHILD PARTICIPANTS	
	NUMBER OF MALES	NUMBER OF FEMALES
30-41 MONTHS ($\bar{x}$ = 36.4 MONTHS) (APPROXIMATELY 3-YEARS-OLD)	15	10
42-53 MONTHS ($\bar{x}$ = 47.0 MONTHS) (APPROXIMATELY 4-YEARS-OLD)	22	30
54-72 MONTHS ($\bar{x}$ = 61.8 MONTHS) (APPROXIMATELY 5-YEARS-OLD)	29	25

TABLE 2

DEMOGRAPHIC CHARACTERISTICS OF PARENTS OF PARTICIPANTS

	PARENTS	
	MOTHERS	FATHERS
MEAN AGE (IN YEARS)	31.7	34.2
RACE (PERCENT OF PARENTS)		
CAUCASIAN	77	81
BLACK	10	11
HISPANIC	7	8
OTHER	6	0
RELIGION (PERCENT OF PARENTS)		
PROTESTANT	51	40
ROMAN CATHOLIC	27	26
JEWISH	2	3
OTHER RELIGIONS	6	3
NO RELIGION	14	29
MEAN FAMILY SOCIAL PRESTIGE INDEX[A]	45.4 (SD = 19.4)	

[A]BASED UPON DUNCAN TSE12 (1980) INDEX (MUELLER & PARCEL, 1981); A SCORE OF 45 IS INDICATIVE OF A VARIETY OF HIGHER LEVEL BLUE COLLAR AND LOWER LEVEL WHITE COLLAR OCCUPATIONS (E.G., ELECTRICAL TECHNICIAN, FORESTER, R.N., HEALTH RECORDS TECHNICIAN, ESTIMATOR).

TABLE 3

RESEARCH STIMULI

(A) LIST OF OCCASIONS DEPICTED IN THE STIMULUS DRAWINGS	
FESTIVE OCCASIONS	EVERYDAY ACTIVITIES
THANKSGIVING FAMILY DINNER	FAMILY BASEBALL GAME
FOURTH OF JULY FAMILY PICNIC	ADULT COUPLE SITTING IN FRONT OF A FIREPLACE
ADULT NEW YEARS EVE PARTY	ADULT WATCHING TELEVISION (1 MAN)
CHILDREN'S BIRTHDAY PARTY	ADULT WATCHING TELEVISION (1 WOMAN)
	CHILDREN EATING LUNCH (2 BOYS TOGETHER)
	CHILDREN EATING LUNCH (2 GIRLS TOGETHER)

(B) LIST OF BEVERAGE PHOTOGRAPHS	
ALCOHOLIC	NON-ALCOHOLIC
BEER	COFFEE
GIN	LEMONADE
SHERRY	MILK
WHISKEY	ORANGE JUICE
WINE	SODA

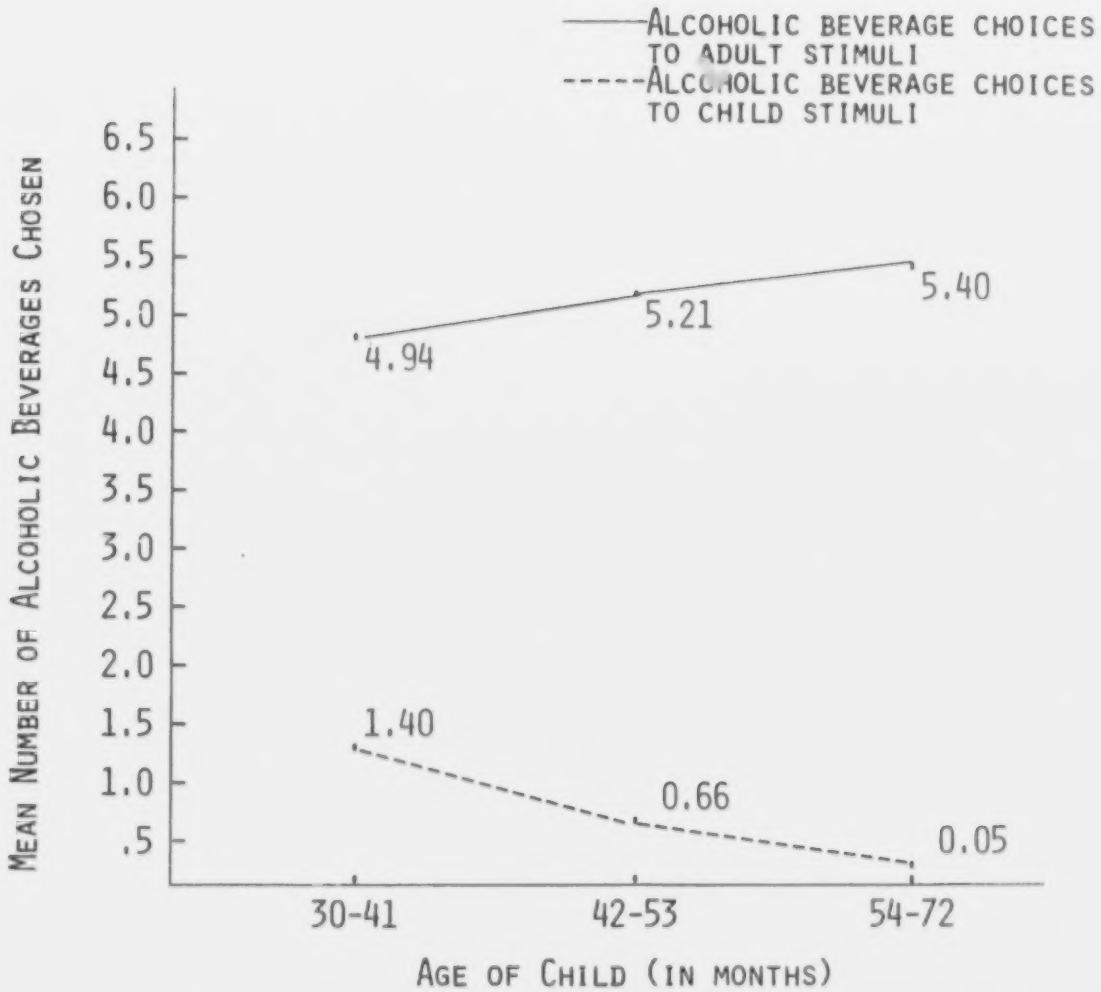

FIGURE 1. MEAN NUMBER [1] OF ALCOHOLIC BEVERAGE DRINKING CHOICES MADE BY PRESCHOOLERS AS RELATED TO CHILD'S AGE AND AGE OF STIMULUS FIGURE (N = 131)

NOTE. [1]REPORTED MEANS ARE WEIGHTED SCORES BASED UPON CHOICES WITH 10 STIMULI.

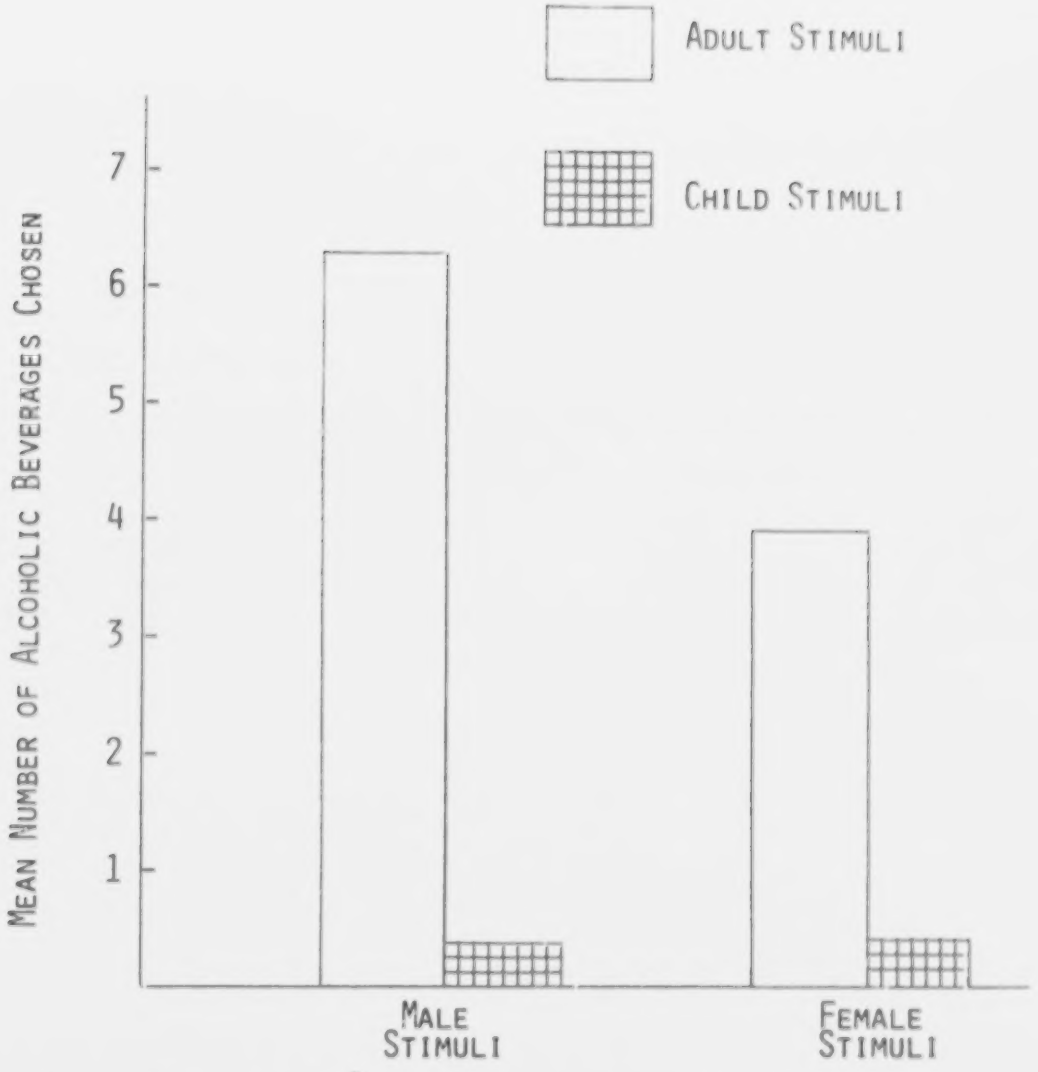

Figure 2. Mean Number[1] of Alcoholic Beverage Drinking Choices Made By Preschoolers as Related to Sex and Age of Stimulus Figure (N = 131)

Note. [1]Reported means are weighted scores based upon choices with 10 stimuli.

TABLE 4

PRESCHOOLERS' IDENTIFICATION OF ALCOHOLIC BEVERAGES AS RELATED TO THEIR AGE AND RECEPTIVE VOCABULARY ABILITY

(N = 131)

AGE VARIABLES	ALCOHOL IDENTIFICATION
AGE	.437**
RECEPTIVE VOCABULARY ABILITY	.383**
AGE WITH RECEPTIVE VOCABULARY ABILITY CONTROLLED	.242*
RECEPTIVE VOCABULARY ABILITY WITH AGE CONTROLLED	.082

NOTE. THESE DATA WERE ANALYZED USING PEARSON CORRELATIONS.

*p < .01. **p < .001.

TABLE 5

MEAN NUMBER OF ALCOHOLIC BEVERAGES IDENTIFIED BY PRESCHOOLERS AS RELATED TO THEIR AGE (N = 131)

AGE		
3-YEAR-OLDS	4-YEAR-OLDS	5-YEAR-OLDS
2.26	2.59	3.06

2.26 —— N.S. ——→ 2.59 —— * ——→ 3.06

2.26 ——————— ** ———————→ 3.06

NOTE. TWO-TAILED T-TESTS WERE COMPUTED FOR THESE DATA, AND AN ARROW WITH AN ASTERISK INDICATES A SIGNIFICANT DIFFERENCE BETWEEN MEANS.

*$p < .001$. **$p < .00001$.

Table 6

Preschoolers' Choices of Alcoholic Beverages (Mean Number of Alcoholic Beverages Chosen as Related to Parental Drinking Status[1]

Parental Drinking Status	Alcohol Variables		
	Alcohol Picked for Adults	Alcohol Picked for Children	Adult Minus Children Discrimination[2]
Father-Escape Drinker	.238*	-.059	.246*
Father Status	.037	-.019	.043
Mother-Escape Drinker	.059	.031	.035
Mother Status	.141	-.089	.173*

Note. [1]Reported Pearson correlations are based upon 111 mothers and 74 fathers.

[2]Discrimination of stimulus figures is computed by the number of alcoholic beverages chosen for adults minus the number of alcoholic beverages chosen for children.

*$p < .05$.

TABLE 7

PRESCHOOLERS' IDENTIFICATION OF ALCOHOLIC BEVERAGES AS RELATED TO PARENTAL DRINKING STATUS[1]

PARENTAL DRINKING STATUS	ALCOHOL IDENTIFICATION
FATHER-ESCAPE DRINKER	.007
FATHER STATUS	.229*
MOTHER-ESCAPE DRINKER	.025
MOTHER STATUS	.109

NOTE. [1]REPORTED PEARSON CORRELATIONS ARE BASED UPON 111 MOTHERS AND 74 FATHERS.

*$p < .05$.

TABLE 8

PRESCHOOLERS' ALCOHOLIC BEVERAGE DRINKING CHOICES AS RELATED TO RACE (N = 111)

RACE	NUMBER OF BEVERAGES CHOSEN[1]	CHOICES TO ADULT STIMULI[2]
CAUCASIAN CHILDREN[A]	6.24	4.98
BLACK CHILDREN[B]	5.27 *	4.81 *
OTHER[C]	7.88 *	6.63 *

NOTE. TWO-TAILED T-TESTS WERE COMPUTED FOR THESE DATA, AND AN ARROW WITH AN ASTERISK INDICATES A SIGNIFICANT DIFFERENCE BETWEEN MEANS.

[1]REPORTED MEANS ARE BASED UPON CHOICES WITH 28 STIMULI.

[2]REPORTED MEANS ARE WEIGHTED SCORES BASED UPON CHOICES WITH 10 STIMULI.

[A]N = 86. [B]N = 11. [C]N = 14 (INCLUDES HISPANIC AND OTHER GROUPS).

*p < .01.